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## Mole Street Journal, April 2014

University of Arkansas, Fayetteville. Dept. of Chemistry and Biochemistry

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## Special points of interest:

- Zhou participates in GK-12 education and outreach
- Spring ACS poster presentations
- Omogo Defends
- Open Access instructions

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## Carrying Chemistry to the Lower Grades

On March 11th and 12th, post-doc **Andrew Zhou** demonstrated crystal structure models of sodium chloride (table salt), graphene, and buckyball to about 200 accelerated students in the 4th and 5th grades. Many students excitedly shouted "buckyball" when they saw the red buckyball model that was built by Professor Wally Cordes, and intelligently built graphene models by connecting black balls with sticks. Some of them even incredibly wrapped thus-built graphene models into buckyball models. The event took place in the Institute of Nanoscience & Engineering at the University of Arkansas.



## Faculty News

### On the Go

**Roger Koeppe** presented an invited lecture at a Gordon Research Conference, Protons and Membrane Reactions: Connecting Membrane Protein Function with Structure, February 23-28, in Ventura, CA. Within the session "NMR Approaches to Membrane Protein Structure and Function," Koeppe reported on the ionization behavior of protein side chains in lipid membranes. His topic was "Approaching the Measurement of Single-Residue Protonation and Ionization Properties in Lipid Bilayer Membranes."

**Christena Nash** and **Ingrid Fritsch** attended the 247th Meeting of the American Chemistry Society in Dallas, TX, March 16-20, 2014. Christena presented "Advances in Redox-magnetohydrodynamic RMHD) Pumping via Electrochemistry of PEDOT-Modified Electrodes" which was authored by Christena Nash and Ingrid Fritsch. Ingrid presented "Electrochemically-Generated Density-Gradient Induced Natural Convection in Microfluidic Systems" which was authored by Vishal Sahore, Adam Kreidermacher, Christena Nash and Ingrid Fritsch.

**Tomasz Janowski** presented a talk at the 26th Austin Symposium on Molecular Structure in Dallas, TX (Feb. 28-Mar. 3, 2014) with the title "Polarized atomic orbitals and their applications in determining molecular properties." **Peter Pulay** was a plenary speaker at the same symposium, and gave a talk with Tomasz Janowski as a co-author: "Ultrafast Quantum/Molecular Mechanics Monte Carlo simulations."

**Peter Pulay** was invited to Peking University to give a short course of molecular quantum mechanics in May, 2014.

**Dawn Weir, Joshua Sakon,** "Molecular Mechanism of Tandem CBD from *Clostridium histolyticum*," 34th Annual Undergraduate Research Conference at the University of Memphis, Feb. 22, 2014.

The Chen group presented five posters at the Dallas Spring ACS meeting. They were:

**Mathurin, L.; Chen, S.; Chen, J.** Tailoring Surface Composition and Morphology of Platinum-Copper Nanotubes through in situ Galvanic Replacement Reactions. 2014 ACS Spring Meeting, Dallas, TX; poster (March 16-20, 2014).

**Crane, C.; Chen, J.** Synthesis of Metallic Janus Nanoparticles using Silica as a Protecting Group. 2014 ACS Spring Meeting, Dallas, TX; poster (March 16-20, 2014).

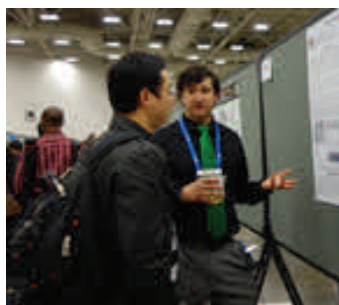
**Jenkins, S.; Chen, J.; Zhang, Y.** Detection of Nanoparticle Aggregation in Complex, Biological Environment, 2014 ACS Spring Meeting, Dallas, TX; poster (March 16-20, 2014).

**Chen, J.; Jenkins, S.; Srivatsan, A.; Reynolds, K.; Pandey, R.** Controlled Release of Hydrophobic Drugs from Poly(ethylene glycol) Covered Gold Nanocages. 2014 ACS Spring Meeting, Dallas, TX; poster (March 16-20, 2014).

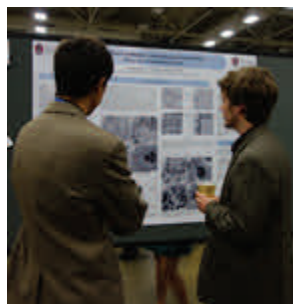
**Chen, J.; Chen, S.; Jenkins, S.; Miller, E.** Seeded Co-Reduction of Cu-Containing Bimetallic Nanostructures and Their Catalytic Activity, 2014 ACS Spring Meeting, Dallas, TX; poster (March 16-20, 2014).

**Jingyi Chen** will give a departmental seminar at Binghamton University, NY on May 28, 2014. "Site-Selective Seeded Growth of Bimetallic Nanostructures and Their Catalytic Applications."

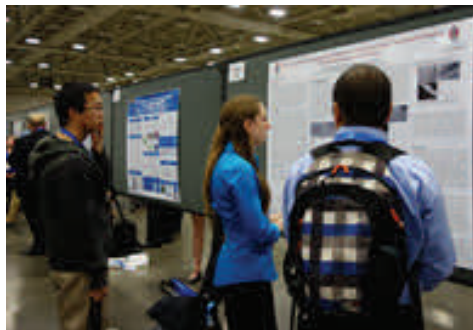
## 2014 Spring ACS Meeting, Dallas TX



Left: Samir Jenkins presents his poster "Detection of nanoparticle aggregation in complex, biological environments."



Left: Cameron C. Crane presents his poster "Synthesis of metallic Janus nanoparticles using silica as a protecting group."



Left: Leanne Mathurin presents her poster "Tailoring surface composition and morphology of platinum-copper nanotubes through in situ galvanic replacement reaction."

Right: A group of nanocrystal researchers gathered at the 2014 ACS Spring Meeting. Left to right they are Younan Xia, Sara E. Skrabalak, Catherine J. Murphy, Chad A. Mirkin, and Jingyi Chen.





## News From IT Services

Sean O'Bryan with Fulbright IT was recently asked by Lisa Holland, Computer Information Systems (CIS) Department Chair at NWTI, to serve as a member of the Advisory Committee for CIS for the typical 2-3 year term. Members "are composed of persons from business and industry with specific occupational expertise and knowledge." The CIS Advisory Committee meets to help advise on curriculum and ensure that material is current with what is being taught. "Sean was a stand-out student, and we have watched him excel in his position with Fulbright IT," said Lisa Holland. "We are thrilled to have Sean's work experience to help guide NTI and our curriculum. His participation is just one more part of a great partnership between NTI and Fulbright College." Sean O'Bryan shares, "I am honored to be afforded the opportunity to assist NWTI with CIS course curriculum advising. My goal is to help ensure that NWTI's CIS programs stay current, productive, and continue to produce skilled technicians. Thereby enabling graduates who are poised and ready for the world's technology workforce."



## Library Notes

### Rare books and materials from the Remnant Trust in Mullins

The University Libraries, the Office of Student Affairs, and the School of Social Work are hosting an exhibit of rare books and materials from the Remnant Trust in Mullins Library in the spring 2014 semester, from Tuesday, January 21 to Monday, May 12. This exhibit represents a once-in-a-lifetime opportunity for visitors to view—and handle—extremely rare materials, ranging from a cuneiform tablet dating to 2200 B. C. to the first printing of the Emancipation Proclamation in 1862. Browse our events pages for a series of lectures that will focus on specific works in the exhibit.

### Mango Premiere

Do you speak Mango? If you have tried our easy-to-use language learning tool, [Mango](#), then you know how much fun learning to speak a new language - or brushing up on a language you have studied before - can be. Lessons are self-paced and packed with real-world conversational and cultural tips. You can also download a [mobile app](#) to learn and practice anywhere. If you haven't tried Mango, yet, here's a whole new way to learn: through **movies**. Mango Premiere has just debuted the following full-length feature films, with plans to add more this spring. Current films include:

#### Language

Chinese (Mandarin)  
French  
German  
Italian  
Japanese  
Spanish  
English for Spanish Speakers

#### Film (link to IMDB description)

Kung-Fu Dunk (2008), Little Big Soldier (2010), Ocean Heaven (2010)  
Around a Small Mountain (2009), La Moustache (2005)  
Jerichow (2008), Yella (2007)  
Corpo Celeste (2011), Days and Clouds (2007)  
Hospitalité (2010), Negative Happy Chain Saw Edge (2007)  
Colors of the Mountain (2010), Gigante (2009), The Window (2008)  
I'll Believe You (2007), The Diary of Anne Frank (1959)

## Omogo Defends

**Benard Omogo** will defend his Ph.D. dissertation "Understanding the Influence of Interfacial Chemistry in Core, Core/Shell and Core/Shell/Shell Quantum Dots on their Fluorescence Properties" April 4, 2014 from 2:00—4:00 p.m. in CHEM 105. Benard's advisor is Colin Heyes. This defense is open to the public.



## Morris Serves Others

**Jacqueline Morris** volunteered at the Dream Center in Little Rock the weekend of February 28. The Dream Center is a homeless shelter that feeds over 1000 meals a week, has an after school club and tutoring program that serves 100 children per day, and provides a meal for them each night. She helped at the Phoenix, AZ Dream Center over spring break.



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## Safety Tip: by Bill Durham

When ordering an unfamiliar reagent, please check the MSDS. You do not want to find out that the reagent is a severe carcinogen after you have been working with it for two months.

## Classroom Etiquette:

Erase the white boards completely and cleanly before leaving a shared classroom, and turn off the lights.



Department of Chemistry  
and Biochemistry

## Excellence in the Central Science

### OPEN ACCESS your article at no cost to you

(by Luti Salisbury)

Publishing your article **OPEN ACCESS** will make your article immediately freely available to everyone, giving you greater visibility of your research, encouraging wider readership, maybe more citations, and will help bridge the digital divide.

Two initiatives available for facilitating open access free of charge to you are:

#### (1) Royal Society of Chemistry (RSC) Journals (<http://pubs.rsc.org/en/journals>)

If you have an article accepted for publication in any of the RSC journals, please contact Luti Salisbury, the CHBC Librarian, for a coupon that will make your article freely available to everyone from the date it is published. Because we subscribe to RSC Gold package, they have given us 25 coupons (normally a £1,600 each to publish one article open access) to aid in this initiative. Please note: If the research has been funded by the NIH and there is mention of this in the article, as well as the grant number, this will be picked up by the RSC and we will be deposited to PubMed Central.

Read the Royal Society's FAQ on this initiative here: <http://www.rsc.org/Publishing/librarians/GoldforGoldFAQs.asp>

Read our Newswire item at <http://newswire.uark.edu/articles/23745/university-libraries-participate-in-royal-society-of-chemistry-s-gold-for-gold-open-access-publishing-initiative>

#### (2) American Chemical Society (ACS) Open Access Initiatives to aid authors (<http://acsopenaccess.org/acs-author-rewards/>)

With ACS Author Rewards, ACS provides publishing credits directly to each Corresponding Author or each article published in any ACS Journals in 2014.

- \* ACS awards publishing credits, worth a total of \$1,500 per article published in 2014; there are no limits on the number of credits an author can earn.
- \* Authors use credits to fund any ACS open access publishing option within the next three years (2015-2017); credits are transferable to another author.
- \* Program designed to help research authors transition to new open access publishing models.

Read about other ACS Open Access Initiatives here: <http://acsopenaccess.org/>

*The department of chemistry and biochemistry at the University of Arkansas strives for excellence in research, teaching and service in chemistry - the central science. We aspire to positions of leadership regarding the discovery of new scientific knowledge, the training of students, and the economic development of the State of Arkansas. We seek to recruit and retain a diverse group of the best faculty, students and staff to address the challenges of the future through interdisciplinary and multidisciplinary research and education.*

## Calendar of Events

### April

- 04 CUME, Chem 201, 5-6 pm
- 07 Seminar, Jeffrey Johnson, Univ. of NC, Chapel Hill
- 14 Seminar, Jiye Fang, Univ. of Binghamton
- 15 Committee Meeting Deadline
- 21 Seminar, Amit Basu, Brown University
- 25 Honors and Awards Ceremony
- 25 CUME, Chem 201, 5-6 pm
- 28 Seminar, Michael Harmata, Univ. of MO-Columbia



### Save the Date!

The 2014 INBRE conference  
will be held November 7-8  
in Fayetteville, AR.

## Library Hours

CHBC Library (CHEM 225)  
<http://libinfo.uark.edu/chemistry>

### Spring Semester Hours: January 13—May 11

Monday—Thursday	8 a.m.-9 p.m.
Friday	8 a.m.-6 p.m.
Saturday—Sunday	Closed

The chemistry and biochemistry library resources can be accessed in the following LibGuides: <http://uark.libguides.com/content.php?pid=110953>. Please bookmark for future use. Theses and dissertation resources can be found on the following LibGuide: <http://uark.libguides.com/content.php?pid=123035&sid=1057466>.

